

7. A sulphurous acid generator comprising:
a first conduit for conducting sulphur dioxide gas;
a second conduit for conducting water;
a third conduit coupled to the first and second conduits and comprising means for
bringing the sulphur dioxide gas conducted in the first conduit and water
conducted in the second conduit into contained, codirectional flow whereby
the sulphur dioxide gas and water are brought into contact with each other;
a mixing tank attached to the third conduit and into which the flow of sulphur
dioxide gas and water are discharged from the third conduit, the mixing tank
defining an outlet through which the water may pass to exit the mixing tank;
a vent conduit in communication with the mixing tank;
a supplemental water conduit for conducting water; and
a fourth conduit coupled to the vent conduit and supplemental water conduit and
comprising means for bringing the sulphur dioxide gas conducted in the vent
conduit and water conducted in the supplemental water conduit into
contained, codirectional flow whereby the sulphur dioxide gas and water are
brought into contact with each other, and means for discharging the water.
8. A sulphurous acid generator comprising:
a first conduit for conducting sulphur dioxide gas and means for drawing the sulphur
dioxide gas through the first conduit; /
a second conduit for conducting water;
a third conduit coupled to the first and second conduits and comprising means for
bringing the sulphur dioxide gas in the first conduit and water from the

second conduit into contained, codirectional flow whereby the sulphur dioxide gas and water are brought into contact with each other, and a passageway through which the sulphur dioxide gas and the water codirectionally flow in contact with each other and in which at least a portion of the sulphur dioxide gas reacts with water to form an acid of sulphur;
a mixing tank attached to the third conduit and into which the sulphurous acid and unreacted sulphur dioxide are discharged from the third conduit, the mixing tank defining an outlet through which the sulphurous acid may pass to exit the mixing tank;
a vent conduit in communication with the mixing tank and means for drawing the unreacted sulphur dioxide gas through the vent conduit;
a supplemental water conduit for conducting water; and
a fourth conduit comprising means for bringing the sulphur dioxide gas in the vent conduit and water from the supplemental water conduit into contained, codirectional flow whereby the sulphur dioxide gas and water are brought into contact with each other, a passageway through which the sulphur dioxide gas and the water codirectionally flow in contact with each other and in which sulphur dioxide gas reacts with the water to form sulphurous acid, and means for discharging the sulphurous acid and any unreacted sulphur dioxide gas.

9. A sulphurous acid generator comprising:

a first conduit for conducting sulphur dioxide gas and means for drawing the sulphur dioxide gas through the first conduit;

a second conduit for conducting water;

a third conduit coupled to the first and second conduits and comprising means for bringing the sulphur dioxide gas in the first conduit and water from the second conduit into contained, codirectional flow whereby the sulphur dioxide gas and water are brought into contact with each other, and a passageway through which the sulphur dioxide gas and the water codirectionally flow in contact with each other and in which at least a portion of the sulphur dioxide gas reacts with water to form an acid of sulphur;

a mixing tank attached to the third conduit and into which the sulphurous acid and unreacted sulphur dioxide are discharged from the third conduit, the mixing tank defining an outlet through which the sulphurous acid may pass to exit the mixing tank;

an absorption tower in communication with the mixing tank into which free floating unreacted sulphur dioxide gas passes from the mixing tank, the absorption tower comprising means for creating a flow of water counter-current to the flow of sulphur dioxide gas, the tower containing a tortuous maze of pathways through which the water and sulphur dioxide gas will pass in counter-current flow, and in which sulphur dioxide gas and water come into contact to form sulphurous acid, the absorption tower having an exhaust vent through which sulphur dioxide not reacted in the tower may pass;

a vent conduit in communication with the mixing tank and means for drawing the unreacted sulphur dioxide gas through the vent conduit;

a supplemental water conduit for conducting water; and